

Device Modeling Report

COMPONENTS:
DIODE/ SCHOOTKY RECTIFIER / STANDARD
PART NUMBER: D1FS4A
MANUFACTURER: SHINDENGEN

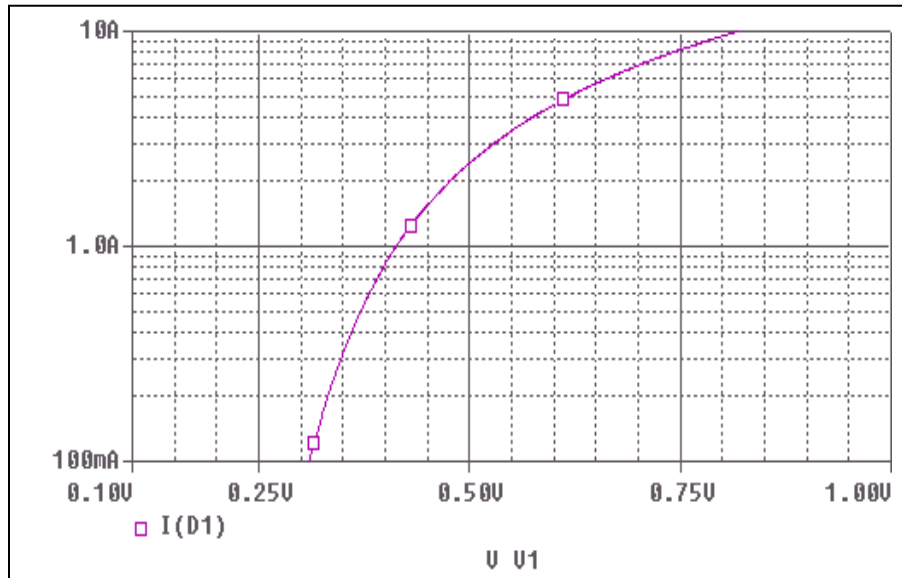


Bee Technologies Inc.

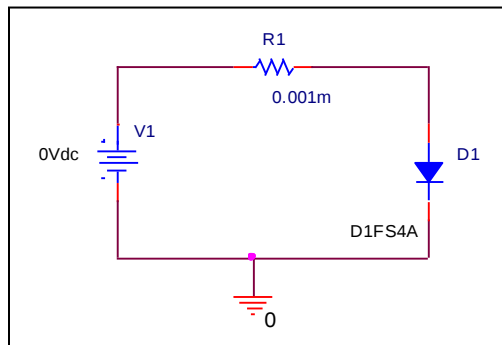
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a positive value)
IBV	Reverse Breakdown Current(a positive value)
TT	Transit Time
EG	Energy-band Gap

Forward Current Characteristic

Circuit Simulation Result

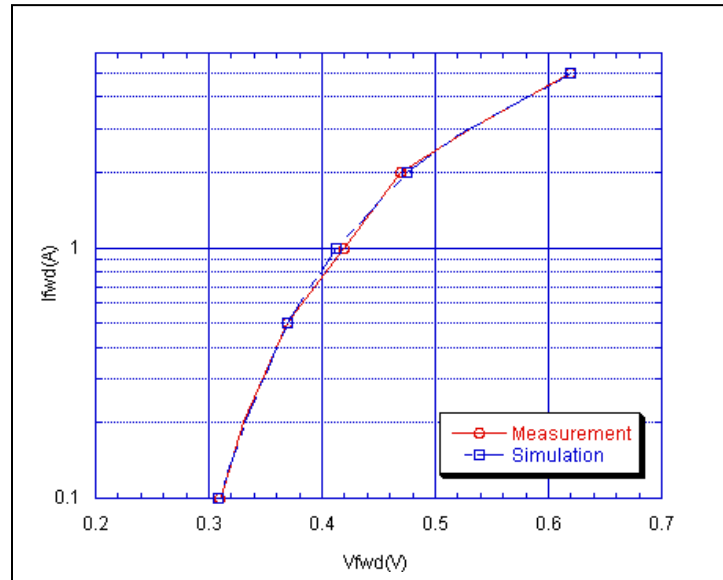


Evaluation Circuit



Comparison Graph

Circuit Simulation Result

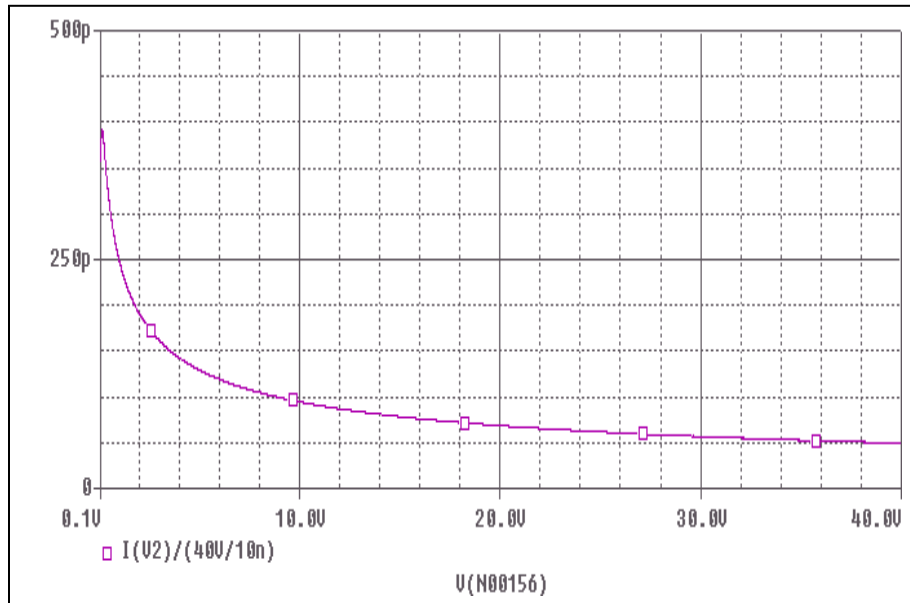


Simulation Result

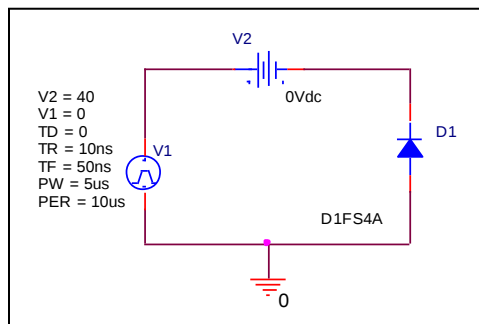
I_{fwd} (A)	V_{fwd} (V) Measurement	V_{fwd} (V) Simulation	%Error
0.1	0.310	0.309	-0.32
0.2	0.330	0.332	0.61
0.5	0.370	0.370	0.00
1	0.420	0.413	-1.67
2	0.470	0.475	1.06
5	0.620	0.619	-0.16

Junction Capacitance Characteristic

Circuit Simulation Result

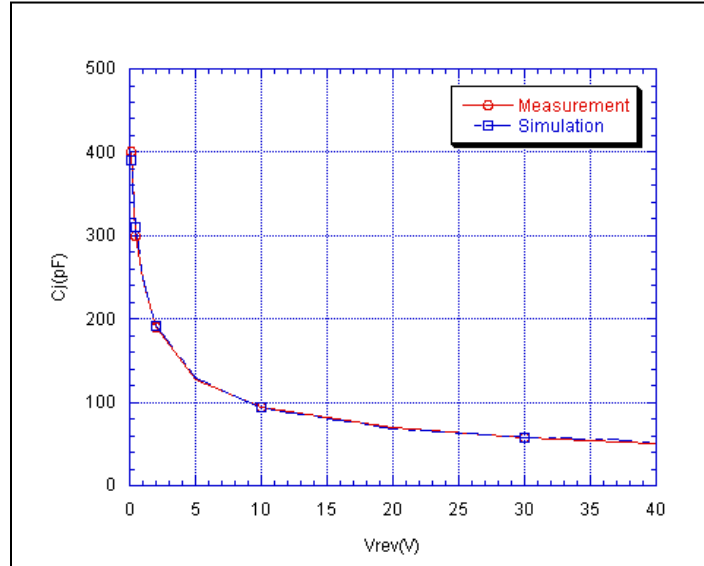


Evaluation Circuit



Comparison Graph

Circuit Simulation Result



Simulation Result

V_{rev} (V)	C_j (pF) Measurement	C_j (pF) Simulation	%Error
0.1	400.000	390.000	-2.50
0.2	370.000	380.000	2.70
0.5	300.000	310.000	3.33
1	248.000	250.000	0.81
2	190.000	192.000	1.05
5	128.000	129.000	0.78
10	95.000	94.600	-0.42
20	69.000	68.500	-0.72
40	49.000	49.800	1.63